REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following remarks is respectfully requested.

Claims 1-14, 16-20 and 22-26 remain active in this application, Claims 1-7, 9, 10, 12-14, 16-20 and 22-26 having been amended and Claims 15, 21 and 27 having been previously canceled.

In the outstanding Office Action Claims 1-14, 16-20 and 22-26 were finally rejected under 35 USC §102(e) as being anticipated by Lengyel (U.S. Patent 6,573,890 B1).

In light of the outstanding rejection on the merits, Claim 1 has been amended to clarify that the claimed object region data generating method includes generating a polygon approximating a contour of the object region in each of the frames, the polygon having vertexes (as described on page 20, lines 5-13 and shown in FIG. 4); associating each of the vertexes in each of the frames with each of the same vertexes in an adjacent frame (as shown in FIG. 7); obtaining trajectories, each of the trajectories linking the same vertexes through the frames based on the time-series variation of the frames (as shown in FIG. 8B); and generating the object region data based on the trajectories (as shown in FIGS. 9 and 10). No new matter has been added by the amendment to Claim 1.

Also, Claim 12 has been amended to state an object region data generating method including generating a polygon approximating a contour of the object region in several frames, the polygon having vertexes; associating each of the vertexes in each of the several frames with each of the same vertexes in an adjacent frame; obtaining trajectories, each of the trajectories linking the same vertexes through the several frames (step 601 in FIG. 13); estimating positions of vertexes of a polygon in a next frame based on the trajectories, the next frame following a last frame of the frames for which the trajectories are obtained (step

602 in FIG. 13); moving the position-estimated vertexes in accordance with a contour of the object region in the next frame (step 604 in FIG. 13); updating the trajectories by associating each of the moved vertexes with trajectories linking the vertexes which are the same as the moved vertexes (page 50, lines 23-25); and generating the object region data based on the updated trajectories. No new matter has been added by the amendment to Claim 1. Similar changes have been made to the remaining pending claims. No new matter has been added.

In view of the clarification of the claimed subject matter as provided by the present amendment, it is respectfully submitted that the present amendment places this application in better form for consideration on appeal, and entry of this amendment after final rejection is respectfully requested on the basis.

The applied Lengyel patent teaches a description of the motion of an animated 3D object by a matrix of 3D positions P shown at col. 3, lines 43-56. Though each column in matrix P represents a 3D position, such as a vertex position in a 3D mesh, the matrix of 3D positions P does not correspond to the polygon of Applicants' invention. On the contrary, the polygon of Applicants' invention approximates a contour of the object region and is a two-dimensional shape defined by a sequence of vertexes which are arranged in a predetermined order. Lengyel does not disclose generating a polygon approximating a contour of the object region in each of the frames.

Lengyel teaches that an adder module 136 combines the residual 3D position data computed for the current frame with the transformed version of the previous frame and stores the resulting approximation of the current mesh in memory 126. The compressor keeps a copy of the current approximation of the vertices for one time increment, e.g., a frame, so that it can be used as a predictor of the mesh for the next time increment in the time-dependent

geometry matrix, V (col. 15, lines 11-20). However, Lengyel does not disclose associating each of the vertexes in each of the frames with each of the same vertexes though the frames.

Lengyel further teaches a prototype segmentation algorithm using a greedy clustering approach based on the triangles of the original mesh. The coordinate-frame trajectories of the seed triangles are compared and the clusters combined if within a given tolerance. The trajectories of the vertices are projected to the local coordinate system of each of the resulting clusters and classified according to the quality of the match throughout the trajectory (col. 8, lines 56-67). Lengyel also teaches a column re-ordering (col. 16, lines 37-50). However, Lengyel does not disclose obtaining trajectories, each of the trajectories linking the same vertexes associated through the frame based on the time-series variation of the frames.

Lengyel teaches mesh simplification for creating a data structure representing time-dependent geometry as a pyramid in space and time (col. 20, lines 4-21). However, Lengyel does not disclose generating the object region data based on the trajectories.

In view of the enumerated deficiencies of Lengyel, it is respectfully submitted that Lengyel does not anticipate or render obvious the subject matter of amended Claim 1, and that Claim 1 is patentably distinguishing thereover.

In regard to Claim 12, Lengyel clearly does not suggest a vertex position estimation, a position-estimated vertex moving, and trajectory update as described in the second embodiment referring to FIGS. 12 and 13. Claim 12 is therefore also considered patentably distinguishing over Lengyel.

For reasons similar to those above noted, the remaining pending claims are likewise believed to be patentably distinguishing over Lengyel. Accordingly, the present application

is believed to be in condition for allowance, and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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